

APPENDIX A

Engineering Trip Report

Mill Creek Dam

Field Trip Log

Trip Log Number:	13	Project No.:	1003032.01180502
Dates:	6/13/02	Times:	1145-1210
Site Name:	New Mill Creek	Location:	Piedra
Prepared By:	DKR/JMH/WAM	Reviewed By:	
Date:	6/13/02	Date:	

Attendees/Visitors Name	<u>1.1.1.1.1.1 Organization/Phone/Email</u>
DKR	MWH, 925.685.6275 x125, david.k.rogers@ei.mwhglobal.com
JMH	MWH, 925.685.6275 x143, james.m.herbert@ei.mhwglobal.com
WAM	MWH, 425.602.4025 x1060, william.a.moler@ei.mwhglobal.com

Weather Conditions:

Clear, warm (low 80s), light breeze

Access Route (attach map):

Highway 99, Ventura Av / State highway 180 (E) through Fresno to Centerville, to Trimmer Springs Rd (N), to Piedra Rd (E), to Elwood Rd, (N)

Attachments:	Yes	No
Photo Log		✓
Photos		✓
Video Log (available)	✓	
Dictation Log (available)	✓	
Topographic Map	✓	

Purpose:

Review proposed location of new damsite.

Field Observations:

Existing Structures/Cultural Features:

A community known locally as Wonder Valley is located within the area just upstream of the proposed dam. Also in Wonder Valley is reportedly California's oldest "dude ranch".

Right of Way/Access Restrictions:

Public roads lead to the new Mill Creek Dam and Reservoir area known locally as Wonder Valley.

Overhead/Buried Utilities:

Overhead / underground utilities lead to and service the Wonder Valley community. A high voltage transmission line traverses the left abutment area.

Description of Proposed Structures (attached a field sketch or sketch on a topo map):

The proposed dam on Mill Creek would be located ~1.3 miles upstream of its confluence with Kings River. The dam would consist of a zoned earthfill embankment rising up to 500 feet above streambed level, that would store up to 1,000,000 acre-feet of water, and spillway and outlet works. Water would come from natural run-off from the 130 sq. mi. watershed, as well as, a 7,200-ft long, 10-ft diameter diversion tunnel from Pine Flat (URS, 2000).

An earlier alternative at the same location (IECO, 1974) consisted of a 240-ft high, 3,600-ft long zoned earthfill embankment dam with the spillway and outlet works positioned in the left abutment. Normal full reservoir capacity was estimated at 205,000 acre-feet. Water would be diverted to the Mill Creek Reservoir via an ~5,000-foot, 10-ft diameter tunnel from Pine Flat Reservoir (IECO, 1974).

Description of Appurtenant Features (spillways, tunnels, pumping plants, flood routing/coffer dams/dewatering during construction, outlet works, switch yards, transformer yards, transmission lines, conveyance pipelines/canals, access roads, security, operation/maintenance):

The proposed dams (URS and IECO) would consist of a zoned earthfill embankments, spillway, and outlet works. In both cases, water would come from natural run-off, as well as, 10-ft diameter diversion tunnels from Pine Flat Reservoir.

Briefly Describe Geologic/Geotechnical Site Conditions:

New Mill Creek Dam and Reservoir would be located near the boundary of the Sierra Nevada foothills and the Great Valley. The state geologic map shows that Mesozoic granitics are exposed low on the valley walls, while Mesozoic basic intrusive rocks are exposed high on the left valley wall, and pre-Cretaceous granitics are high on the right valley wall. Recent alluvium fills the valley floor. Pre-Cenozoic meta-volcanic

rocks make up most of Dalton Mountain and Bald Mountain in the upper reaches of the proposed reservoir (CDMG, 1965).

The IECO report (1974) describes the high valley wall rocks as slightly weathered and fractured metamorphic rocks with aplite dikes and quartz seams. The left abutment basic and granitic rocks are mostly covered with slope wash. The gray basic rocks are described as hard, fractured and slightly weathered. Highly weathered and decomposed granitic rocks are exposed in the power line road cuts, which may extend to considerable depths. The alluvium in the valley floor is greater than 15 feet thick (USBR investigations), and consists of river-deposited sand and gravel with boulders with only a small percentage of silt (IECO, 1974).

As with most sites in the region, studies indicate that there are no faults in the area capable of producing ground motions greater than those generated by four known regional sources that include the San Andreas fault system, the Sierra Frontal fault system, the White Wolf fault, and the Garlock fault (USCOE, 1990).

Location/Description of Nearest Borrow Areas (attach map or show on topo map):

Previous investigations by the USBR and USCOE identified suitable concrete aggregate along Kings River and lower valley of Mill Creek. Impervious materials are located about 2 miles upstream of the proposed IECO dam axis. The Mill Creek valley alluvium, both upstream and downstream of the proposed dam axis, is considered the primary source of pervious and semi-pervious materials (IECO, 1974).

Location/Description of Equipment/Material Staging and Lay Down Areas (attach map or show on topo map):

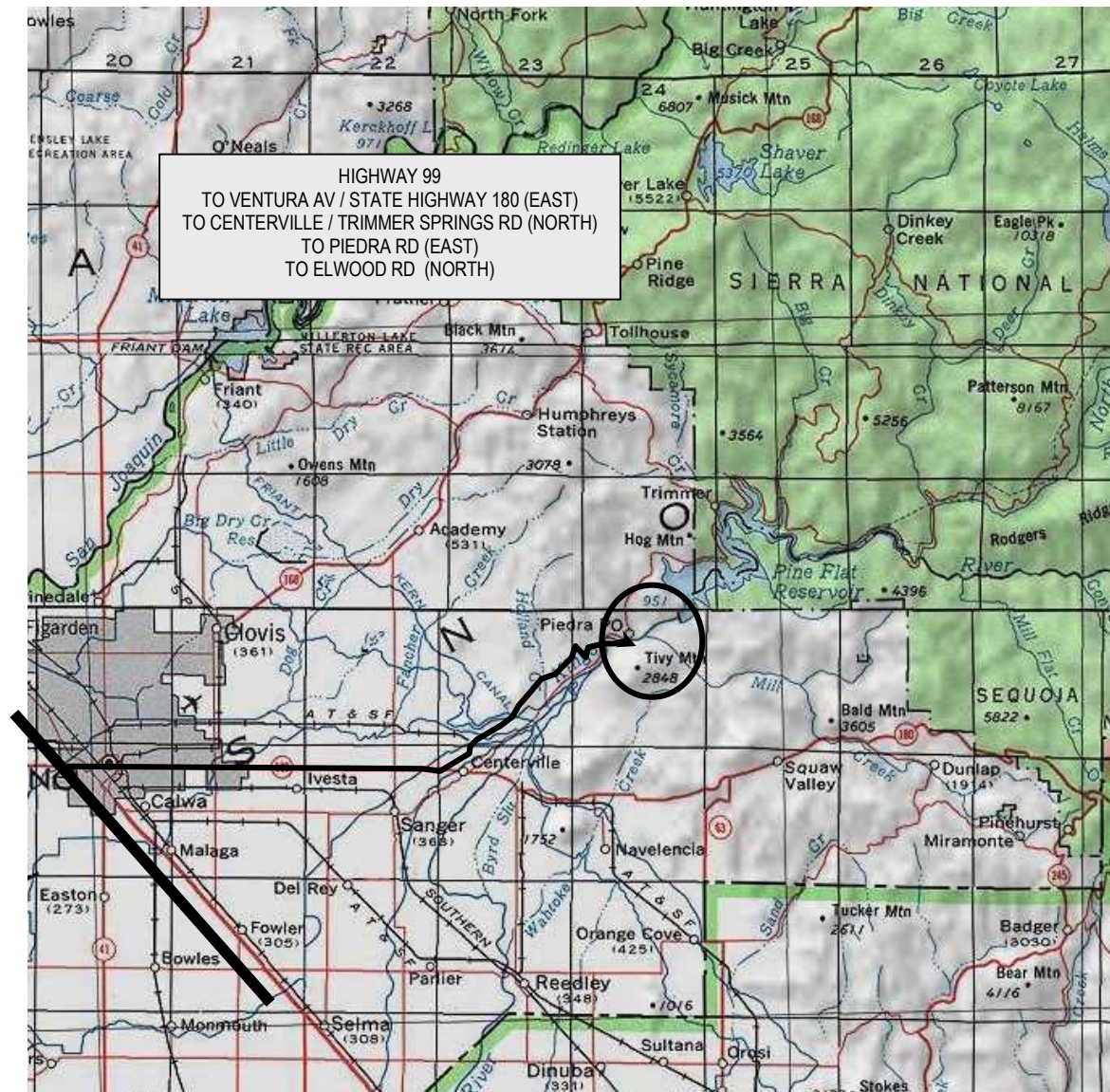
Potential staging and laydown areas are present within the Mill Creek valley.

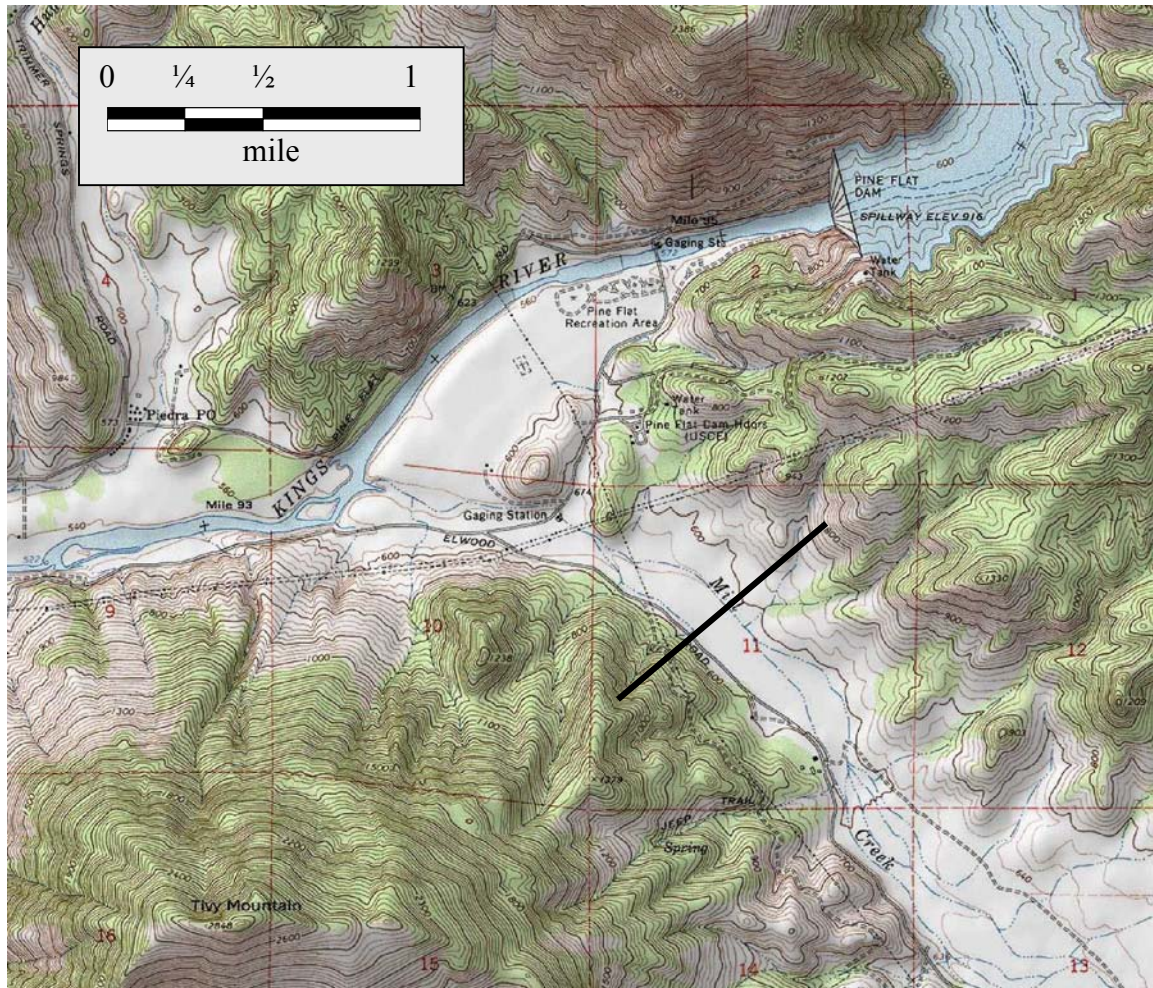
Identification of Environmental Sensitive Areas (wetlands, springs, rivers, streams, endangered/threatened species habitats, etc.):

A riparian habitat is found along Mill Creek. Oak woodland habitats are found on the abutments and valley floor.

Description of Mining or Other Anthropologic Activities:

None were noted.





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